

REMARKS

Claims 569-1718 were previously pending in this application. Claims 594, 710, 746, 871, 898, 1023, 1050, 1175, 1202, 1297, 1321, 1409, 1470-1471, 1480, 1570, 1572, 1602, 1611, 1689, 1698, 1699, 1707 and 1718 have been amended by substituting rewritten forms of these claims. Claims 1719-1727 have been added above. Claims 718, 870, 1022, 1174, 1295, 1408, 1569 and 1613 have been canceled. Accordingly, claims 569-717, 719-869, 871-1021, 1023-1173, 1175-1294, 1296-1407, 1409-1568, 1570-1612 and 1614-1727 are presented for further examination.

The purpose of the above amendments to the claims is two fold.

First, in yesterday's Communication, Applicants submitted a Claim Support Table as Exhibit A in order to provide information on the support for the pending claims in this application. As indicated on page 2 in the Communication, several claims in the table were designated "TO BE ADDRESSED IN A FUTURE RESPONSE." These claims included claims 718, 870, 1022, 1174, 1295, 1408, 1409, 1470, 1569, 1613 and 1698. These and other claims contained elements which may have raised issues of support. Because it is Applicants' desire to reduce any remaining issues and to refrain from raising any new issues, as much as possible, several claims have been amended and several others have been canceled.

In further detail, claims 594, 746, 898, 1050, 1202, 1321, 1480 and 1602 have been amended by deleting "formamide" as a Markush member for chemical coupling means.¹ Similarly, claims 719, 871, 1023, 1175, 1297, 1409, 1471, 1570 and 1699 have been amended by removing "a calorimetric measurement" as a Markush member for non-radioactive detection means. Also, claims 1470 and 1698 have been amended by deleting the member directed to "a polynucleotide sequence capable of recognizing a signal-containing moiety." Other claims solely directed to such "polynucleotide sequences capable of recognizing a signal-

¹ It should also be noted that the word "be" [can be carried out . . .] was inadvertently missing from claims 746, 898, 1202, 1321 and 1480. This has been corrected in the wholly rewritten forms of these five claims.

containing moiety" have been canceled (claims 718, 870, 1022, 1174, 1295, 1408 and 1569).

In other changes, claim 1613 was also canceled, that claim having recited "wherein said labeled oligo- or polynucleotide of interest prepared by said incorporating step comprises at least one internal modified and at least one terminal modified nucleotide." Further, claims 1611, 1689, 1707 and 1718 have been amended to correct a minor typographical error in the form of "oligoor," which should have recited "oligo- or." Lastly, with respect to the amendments, claim 1572 has been amended to recite the process "wherein said one or more clones or DNA fragments or oligo- or polynucleotides derived from clone or clones are derived from said particular chromosome or said chromosome of interest or said chromosome in said interphase cell of interest."

Second, while preparing the Claim Support Table (Exhibit A to the August 30, 2000 Communication), Applicants' attorney noticed that a few of the previously pending and now former dependent claims were missing from the new pending claims 569-1718. Thus, claims 1719-1727 have been added above to fill the void with respect to some of the former claims canceled by Applicants' May 23, 2000 Amendment. The newly added claims above are directed to the following subject matter:

<u>New Claim No(s).</u>	<u>Claim Recitation</u>	<u>Comments/Former Claim No(s).</u>
1719-1722	said nucleic acid of interest [being] selected from the group consisting of DNA, RNA and DNA-RNA	1299, 1412, 1714
1723 & 1725	said direct detection [being] carried out with the same indicator molecules	1573 & 1577
1724 & 1726	said direct detection [being] carried out with different indicator molecules	1475 & 1709

<u>New Claim No(s).</u>	<u>Claim Recitation</u>	<u>Comments/Former Claim No(s).</u>
1727	said detecting step comprises localizing said detectable oligonucleotides or polynucleotides by means of said one or more modified or labeled nucleotides or nucleotide analogs	720, 872, 1024 & 1176

It is believed that the above changes to the claims are relatively minor in nature and do not constitute the insertion of new matter into Applicants' disclosure. As shown by Applicants' previously submitted Claim Support Table, the subject matter of all of the pending claims is supported by their original disclosure. Entry of the foregoing claim changes is respectfully requested.

In order to further expedite the Examiner's review of the presently claimed invention, Applicants' attorney is preparing a composite set of claims that reflect the latest status of pending claims 569-1727. As soon as it has been completed, Applicants will file the composite set of claims for this application.

Favorable action is respectfully requested.

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Dean L. Engelhardt, et al.
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Page 12 [Second Supplemental Amendment (Following Applicants'
August 30, 2000 Communication For Transmitting
Claim Support Table - August 31, 2000)]



SUMMARY AND CONCLUSIONS

Claims 569-717, 719-869, 871-1021, 1023-1173, 1175-1294, 1296-1407, 1409-1568, 1570-1612 and 1614-1727 are presented for further examination in this application. Of these claims, claims 594, 719, 746, 871, 898, 1023, 1050, 1175, 1202, 1297, 1321, 1409, 1470-1471, 1480, 1570, 1572, 1602, 1611, 1689, 1699, 1707 and 1718 have been amended by presenting wholly rewritten forms. New claims 1719-1727 have been added. Claims 718, 870, 1022, 1174, 1295, 1408, 1569 and 1613 have been canceled without prejudice or disclaimer.

The fee for the above changes to the claims is \$18 for the presentation of one additional dependent claim (8 claims having been canceled and 9 claims having been added). The Patent and Trademark Office is hereby authorized to charge the \$18 large entity fee to Deposit Account 05-1135. No other fee or fees are believed due in connection with this Second Supplemental Amendment. In the event that any other fee or fees are due, however, authorization is hereby given to charge the amount of any such fee(s) to Deposit Account No. 05-1135, or to credit any overpayment thereto.

If a telephone conversation would further the prosecution of the present application, Applicants' undersigned attorney request that he be contacted at the number provided below.

Respectfully submitted,

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